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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,562	01/23/2006	Andreas Huchsam	R305860	2915
2119	7590	12/04/2008	EXAMINER	
RONALD E. GREIGG GREIGG & GREIGG P.L.L.C. 1423 POWHATAN STREET, UNIT ONE ALEXANDRIA, VA 22314			PARKER, FREDERICK JOHN	
			ART UNIT	PAPER NUMBER
			1792	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,562

Applicant(s)

HUEHSAM, ANDREAS

Examiner

Frederick J. Parker

Art Unit

1792

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 13, 16-28, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 16-28, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12,28,33 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for electrostatic corona spraying, does not reasonably provide enablement for other forms of electrostatic spraying, e.g. tribo. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to carry out the invention commensurate in scope with these claims. Applicant's amended claims recite the axial slots, formation of a Faraday Cage effect which inhibits coating of axial slots, and penetration of the slots. Since such detrimental effects would not occur by tribo spraying, the Spec. [024] limits the spraying means to corona, and Applicants arguments of pages 7-8 appear directed to corona.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12,28,33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejections not repeated from the previous Office action are withdrawn due to amendment or explanation.

- Claims 12,28,33 are vague and indefinite because 1) the meaning of the phrase “whose field-free space can be coated only with difficulty” is uncertain, since “with difficulty” is a relative phrase without stating relative to what it is difficult. For clarity, it is suggested this phrase be deleted, and replaced with “during corona electrostatic spraying” or similar language; 2) second to last line, it is uncertain if the particles simply “can” i.e. are capable of, penetrating into the axial slots or they actually do penetrate. A positive recitation is recommended.
- Claim 28 is vague and indefinite because it contains method limitations in an apparatus claim, the limitations failing to further define the structure of the apparatus which might define patentability. MPEP 2114-2115. Applicant cannot properly claim a combination of a device and a material worked upon, In re Hughes 49F. 2nd 478. There is no patentable combination of a device and the material upon which it works, In re Rishoi 94 USPQ 71. The specific recitations of the method limitations in the claim neither define nor structurally limit the apparatus.

The Examiner previously mis-numbered the claim as 33, which Applicants fully recognized on pages 2-3 of Remarks as being directed to the apparatus claim, which is claim 28. Hence, while the Examiner apologizes for the inadvertent typo, recognition of the error and the intended claim was apparent and could have been addressed.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 12-13, 16-27, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 and Otani et al US 5741558 and further in view of Matsuzaki et al US 5319002. METHOD CLAIMS.

Habsburg-Lothringen teaches a method of coating 3-dimensional grounded (i.e. "lower potential" per clm 13) electrical armature and stator workpieces (same as Applicants' article to be coated) in a conveyor production line comprising a single closed housing (fig. 2) including a powder coating means and a cleaning means comprising suction (col. 11, 18-30 and elsewhere) for removing excess or undesired coating powder from coated workpieces (col. 3, 33-44 and elsewhere), the coating means **exemplified** by an electrostatic fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & "Background..." section, etc). Hence the use of an electrostatic spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility of electrostatic spraying for the same purpose with the benefit of spraying specific desired portions of the substrate. **The coating of slots in stators is cited, for example col. 13, 44-45, etc.** Such structures are the same as Applicant's articles to be coated and since they are recessed would also necessarily be prone to similar Faraday Cage problems. The reference is silent on the thickness of coatings; however, Hopeck teaches a similar electrostatic spray coating of the same (epoxy) powders in which it is stated on col. 4, 14-18 **that coatings up to approximately 0.045"/1.14 mm (within Applicants' range of 1-2 mm) can be achieved before the insulating qualities of the coating material cause the thickness to become self-limiting** (same principle as Applicants, see Spec. [0009]). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the

overlapping portion of the coating thickness disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. Coated workpieces are heated to cure, (Background... section and elsewhere) per claim 26. Cooling is not cited but would have been apparent to give the coated product practical commercial utility since an article at curing temperatures would not be commercially viable, per claim 27. However, details of the spraying means and particle size are not disclosed.

Otani et al teaches use of a high voltage tribo or corona electrostatic spray means (clms 18, 20) for direct coating of 3-dimensional objects on conveyors without further limitation, thereby clearly capable of coating the 3-dimensional electrical workpieces of Habsburg-Lothringen. The spray means comprises a spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source (clm 16) is supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun (clm 21,22,24,25). See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide motivation or suggestion to combine a reference, *In re Clinton*, 188 USPQ365. Particle size is not taught. Matsuzaki et al recognizes the need for electrostatically applicable epoxy-based powders which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) or other such means. Application of the inventive epoxy-based powders onto slots of motor armatures are cited in Example 1 (PS about 165 microns).

As to new claim 33, the combination of prior art references contain the essential limitations of the claim including a workpiece with slots and electrostatic powder spraying of particle sizes which overlap with Applicants' "coarse plastic powder" having a diameter of >150 microns. Therefore, it would have been reasonable to expect that the same phenomenon would have occurred in both Applicants' process and that of the prior art, particularly given the passage of Hopeck highlighted above, such that sufficient powder would have been deposited "within the axial slots" of the workpieces to form the coating. Thus, the prior art would have met the limitations of the claim.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Habsburg-Lothringen by incorporating the spray means of Otani et al and the known particle sizes for such spray means as taught by Matsuzaki et al to provide a thick powder coating means for 3-dimensional workpieces which provide uniform insulating films which can be applied electrostatically while reducing powder waste/ improving process economics.

6. Claims 28,32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 in view of Otani et al US 5741558 and Matsuzaki et al. APPARATUS CLAIMS.

Habsburg-Lothringen teaches an apparatus for coating 3-dimensional workpiece in a conveyor production line comprising a single housing including a powder coating means, including sprayers, and a suction/ vacuum cleaning means for removing excess or undesired coating powder from workpieces (col. 3, 33-44 and elsewhere). The coating means is exemplified by a

fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & "Background..." section, etc). Hence the use of a spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility and equivalence of spraying for the same purpose with the benefit of spraying coating specific desired portions of the substrate. While details of the spraying means are not disclosed, Otani et al teaches such a spray means for coating 3-dimensional objects on conveyors without limitations, thereby clearly capable of coating the workpieces of Habsburg-Lothringen. The spray means comprises a corona or tribo spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source is supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun. See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide motivation or suggestion to combine a reference, In re Clinton, 188 USPQ365. While particle sizes are not cited, Matsuzaki et al teaches the need for electrostatically applicable epoxy-based powders by spraying which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) as well as other electrostatic means, demonstrating that electrostatic spray guns are capable of spraying the powders and particle sizes as claimed. The Examiner notes the prior art discloses all the features of the apparatus, and that the recited method limitations do not further limit the structure of the apparatus; thus the manner

or method of utilization of the apparatus machine is not germane to patentability of the apparatus itself, MPEP 2115.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Habsburg-Lothringen by incorporating the spray means of Otani et al to provide a known coating means for 3-dimensional workpieces which further provides the benefit of reducing powder waste/ improving process economics and the known particle size ranges of Matsuzaki capable of forming thick powder coatings. It is further the Examiner's position that the limitations of Applicants claims 28 & 32 merely combine a large number of known apparatus limitations to form a coating device, wherein the features of the limitations are known in the recited art and their combination merely leads to a predictable outcome and therefore the combination of structural elements do not impart patentability because of the predictability of the outcome. The combination of familiar elements according to known methods is generally obvious when it does no more than yield predictable results, KSR, 127 Sup. Ct. at 1739, 2007.

Response to Arguments

Applicants arguments relative to the prior art rejections have been considered.

The Examiner maintains that the method limitations in the apparatus claims fail to further limit structure, and that the prior art apparatus rejections contain the entirety of the structure as claimed which is capable of carrying out the method as claimed.

As to the method claims, the Examiner maintains that Hapsburg-Lothringen merely exemplifies fluidized bed application of powders. Applicant's arguments that it discloses

fluidized bed is "in fact the **only** method for coating of an armature.." is simply incorrect. The passage on column 4 states that "...the present invention is not limited to that type of coating", in reference to a fluidized bed. Clearly it demonstrates the reference envisions other types of conventional electrostatic powder coaters. Further col. 1 cites the conventionality of coating motor parts (i.e. armatures, stators) electrostatically both by spraying and fluidized bed, establishing a recognized art equivalence between the methods for coating motor parts. Thus substitution of one for the other would have been obvious because of the clear expectation of equivalent or similar results. Applicants repeated arguments regarding the deficiencies of fluidized bed thus are moot. Applicant's arguments further fail because the secondary reference Hopeck teaches to form thick coatings of the same materials used by Applicants using electrostatic spraying, while Otani further teaches electrostatic spray means for such 3-dimensional workpieces while Matsuzaki teaches electrostatically forming thick coatings using similar particle sizes as claimed by Applicants.

Applicants attempt to attack individual references but do not convincingly provide rationale/reasoning why the claimed method overcomes the totality of the prior art as set forth by the Examiner. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants claim the novelty of having discovered that spraying coarse (>150 micron) particles electrostatically to provide thick coatings "has not been previously known to anyone skilled in the art". However, Matsuzaki expressly teaches to form thick coatings (250 microns or

more) using particle sizes of 3-180 microns, which overlaps Applicants' particle range. Thus Applicants' assertions are not persuasive.

Applicants assert Matsuzaki discloses only use of a fluidized bed. In fact, col. 2, lines 57- 66 utilize an electrostatic spray gun for testing charge characteristics to determine suitability for thick coatings. Fluidized beds are exemplified but given the overall teachings, such spray means are clearly suitable for electrostatic spraying. The presence of a charge control agent in the reference is not prohibited by Applicants claims which are open to additional steps and components, so these arguments are not persuasive.

The Examiner maintains the claims as provided merely recite a series of features disclosed in the prior art for the same workpieces and the same end-result, namely applying thick coatings on portions of motor elements which experience Faraday Cage effects, using overlapping coarse particle sizes. However, the Examiner would be amenable to an Interview to better understand and discuss issues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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